UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

VIA OVERNIGHT DELIVERY

Mr. Gerard M. Kenny
BTE Development, LLC
Kenny Construction Company
250 Northgate Parkway
Wheeling, Illinois 60090-2684

Re: 130 East Lake Street, Request for Access to Survey for Radioactive Material Associated with Lindsay Light Co.

Dear Mr. Kenny:

Thank you for your letter dated February 28, 2005 which raises several questions about U.S. EPA's interest in determining whether or not thorium-impacted materials may be present at your property located at 130 E. Lake (the "Property"). Your letter questioned the basis of U.S. EPA's authority to investigate the Property. Your letter also expressed puzzlement over U.S. EPA's notification to the City of Chicago's Department of Environment (Chicago DOE) regarding U.S. EPA's interest in conducting a radiological survey of your Property and lack of notification to the Illinois Emergency Management Agency (IEMA). Your letter also stated that RSSI, Inc. had conducted a radiological assessment of your Property. U.S. EPA would be pleased to review the radiological assessment if you would provide a copy.

This response confirms U.S. EPA's statutory authority to seek access to your Property and to seek information regarding your Property because thorium was produced, transported and disposed of in the area and an investigation of your vacant lot may provide the Agency with information concerning the existence of or extent of release or threat of release of a hazardous substance.

It may be helpful to provide you with additional background to improve your understanding of U.S. EPA's role with respect to the investigation of thorium in the Streeterville area. The Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. § 9601 et seq., (CERCLA) and its implementing regulations embodied in the National Contingency Plan (NCP) at 40 CFR Parts 300 to 399 set forth U.S. EPA's authority to monitor, survey, test and

gather other information necessary to identify the existence and extent of a release or threat of release of hazardous wastes and the extent of danger to the public health or the environment. Thorium is a hazardous substance as defined by CERCLA Section 101(14). Your letter apparently cites to CERCLA Section 104(a) which provides U.S. EPA with the authority to respond to a threat of release of a hazardous substance. In addition to that response authority, CERCLA Section 104(e) provides U.S. EPA with authority to gather information and access property whenever there is a release or threat of release or whenever the Agency has reason to believe that a release has occurred or is about to occur. These investigative and access authorities are also reflected in the NCP at 40 CFR § 300.400(d). Given that there may be potentially radiologically contaminated soils at the Property, a threat of release is substantial. If thorium contaminated soils are disturbed during development activities they would be released posing a threat to human health and the environment.

The Lindsay Light Company (Lindsay) manufactured, at several locations in the Streeterville neighborhood of Chicago, gas lights and gas mantles for residential and commercial use beginning in approximately 1904. The historic record regarding Lindsay's production of thorium is uncertain and it can not be assumed that Lindsay's thorium production in the Streeterville area did not start until 1915. According to a U.S. Tariff Commission document on the Incandescent Gas-Mantle Industry published in 1920, in 1914 Lindsay expanded its thorium manufacturing capacity to meet the increased domestic and foreign demand caused by the outbreak of war in Europe. The production of thorium for the gas light mantles resulted in a sandy waste known as mill tailings that made excellent fill material. The November 1935 Lindsay Board of Director's Meeting minutes discuss plans to move Lindsay's Streeterville operations to the City of West Chicago by September 1936. At the West Chicago facility, which became known as the Rare Earths Facility or REF, Lindsay and its successors continued to produce thorium as well as other radioactive materials for commercial and defense-related purposes. As a result of Lindsay's Rare Earths Facility thorium manufacturing and disposal activities, four West Chicago areas were listed on the National Priorities List of Superfund sites. U.S. EPA is the lead agency at these sites and has arranged for the Illinois Emergency Management Agency, Division of Nuclear Safety (IEMA/DNS) (formerly known as the Illinois Department of Nuclear Safety) to assist with certain investigation and cleanup monitoring activities.

In the West Chicago area, U.S. EPA, with the assistance of IEMA/DNS, has overseen the clean up of over 670 properties in residential areas, a 100-acre public park, a sewage treatment plant, and beginning in the Spring of 2005, the clean up of over six miles of creek and river in DuPage County. The widespread use of the thorium material as fill in West Chicago likely reflects a similar widespread use of the Lindsay Light thorium residuals in Chicago. Unlike the relatively open areas in the City of West Chicago where the extensive nature of the thorium contamination was relatively easy to identify, most of the Lindsay Light thorium in Chicago was shielded from detection by asphalt, sidewalks, streets and buildings. As my letter indicates, we have obtained

approximately 15 property owners' permission and surveyed approximately 17 vacant lots in Streeterville north of the Chicago River but your Property is the sole vacant lot remaining south of the Chicago River that we have not surveyed.

The following discussion may clear your confusion about why U.S. EPA had not listed IEMA/DNS in its courtesy copies. The REF in West Chicago initially was an Atomic Energy Commission-licensed facility, then later a Nuclear Regulatory Commission (NRC)-licensed facility. In 1990, the NRC granted the State of Illinois an amendment to its agreement-state licensing program to include licensing control of the thorium material disposed of at the REF. Since 1990, the REF has been undergoing cleanup and decommissioning under an IEMA/DNS license. Lindsay's operations in Streeterville, however, predated the Atomic Energy Commission licensing regulations and were never subject to a state or federal license. U.S. EPA has acted as the lead agency for the investigation and cleanup of the Lindsay Streeterville thorium cleanup, in part, because the thorium was not produced by a federally-licensed or agreement state-licensed facility. For over a decade, nonetheless, U.S. EPA has collaborated with IEMA/DNS, its predecessor agency and with the Illinois Environmental Protection Agency on investigations and development of appropriate cleanup standards for the Lindsay materials. IEMA/DNS has not requested copies of each U.S. EPA request for access to survey a property.

U.S. EPA does routinely notify the City of Chicago when it seeks access to properties to determine whether Lindsay Light thorium residuals are present. In this particular instance, however, at a meeting regarding Lindsay contamination, attended by U.S. EPA, the Chicago DOE, and the public, it was citizens who brought it to the attention of Chicago DOE and U.S. EPA that there was a vacant lot in the Lindsay vicinity that had not been investigated. Therefore, we properly copied the Chicago DOE on our letter requesting access. The City of Chicago has worked extensively with U.S. EPA to prevent uncontrolled exposure of the public and construction and utility workers to radiation posed by the Lindsay Light thorium contamination. Because most of the Lindsay Light thorium sites have involved property that is being redeveloped and require extensive utility upgrades or installation of utilities/infrastructure, traffic re-routing, and street closures, the City has been involved in almost every thorium investigation and site in the City. Further, at several of the Streeterville sites, City right-of-ways have been impacted by the thorium contamination. For all of these reasons, typically U.S. EPA informs the Chicago DOE of any request for access to investigate property in the City as we did in this instance.

Several factors support U.S. EPA's exercise of its investigative authority and right to conduct a walkover survey of the Property. These factors include: prior use of the property (railroad yard), proximity to the Lindsay Light II site as well as proximity to another site contaminated with thorium material, and your Property's proximity to the tunnel system running under the City of Chicago streets. Additionally, the fact that your Property is a vacant lot supports the theory that

if radiologically contaminated materials were deposited there, they most likely remain there as apparently no development has occurred that would have removed them. We should note that prior to investigation, U.S. EPA had no direct evidence at any of the Lindsay Light II properties, that thorium contaminated materials were disposed of at those locations.

You also claim that your Property's distance from the Lindsay Light II site at 316 E. Illinois Street is not evidence of contamination and that the Chicago River is a natural barrier. While the 130 E. Lake Street property is across the river from the Lindsay Light II site, U.S. EPA previously discovered thorium contamination south of the river at the Lakeshore East property (the former Family Golf Center at 221 N. Columbus Drive). The Lakeshore East property is located less than .25 mile east of your Property. Additionally, an extensive tunnel system operated under the City of Chicago from 1909 until 1959 provided routes for delivery of coal and disposal of cinder, ash, waste and excavated material. This tunnel system included routes on both sides of the river and ran under the river in at least two areas. A copy of a portion of the tunnel map is enclosed for your reference. Merely being located across the river does not eliminate the possibility that thorium contamination could have come to be located on your Property, nor does it diminish U.S. EPA's interest in conducting a radiological survey of the Property.

Based on these factors, we strongly recommend a radiological survey of your Property prior to development. If radiological material is discovered after development commences, based upon our experience in Streeterville, the costs associated with proper handling may be far greater, as is the potential that material may be disposed of improperly, and workers and equipment may become contaminated.

U.S. EPA desires to conduct the radiological survey as soon as possible and is available to conduct the survey on the following dates: June 22, 24, 27 or 30. We believe a walkover survey including any sampling will take less than 8 hours, but no more than 24 hours. Please inform us which date is most convenient. For your information I have enclosed a general description of U.S. EPA radiation walkover survey procedures that U.S. EPA and other property owners have used in Streeterville.

I have also enclosed for your signature the access agreement that was enclosed with my correspondence dated November 12, 2004. If you do not contact me by May 23, 2005, I will assume that you do not intend to provide access to U.S. EPA to perform this survey and will not provide U.S. EPA with a copy of any environmental assessment of the property.

Once we have completed the walk-over survey and any lab analysis, we certainly are willing to share this information with you. In the meantime, if you still have lingering questions regarding U.S. EPA's legal authority to request or conduct an investigation of the Property, please contact

please contact Mary Fulghum, Associate Regional Counsel, at (312) 886-4683 or Cathleen Martwick, Associate Regional Counsel, at (312) 886-7166. As I stated in my earlier letter, we appreciate your cooperation and look forward to working with you to conduct this survey.

Sincerely,

Verneta Simon

Verneta Simon
On-Scene Coordinator
U.S. EPA Region 5

Enclosures
- Chicago Tunnel Map
- Walkover Radiation Survey Procedures
- Access Form

cc: Mark Goodman, Goodman and Assoc.
Eli Port, RSSI
Kimberly Worthington, City of Chicago DOE
Richard Allen, IEMA/DNS

bcc: Mary Fulghum , C-14J, w/enclosures
Charles Gebien, SE-5J, w/enclosures
Eugene Jablonowski, SR-6J, w/enclosures
Larry Jensen, SMF-4J, w/enclosures
Mike Joyce, P-19J, w/enclosures
Cathleen Martwick, C-14J, w/enclosures
Debbie Regel, SE-5J, w/enclosures

Lindsay Light Streeterville Contamination
U.S. EPA Gamma Radiation Survey Walkover Procedures

These are U.S. EPA's general procedures for a radiation survey walkover to locate gamma anomalies that may indicate the presence of thorium. At other properties in Streeterville the background radiation was established at 2.1 pico curies per gram (pCi/g) total radium. U.S. EPA's cleanup threshold at the Lindsay sites is 7.1 pCi/g total radium which is derived from cleanup standards found in Uranium Mill Tailings Radiation Control Act of 1978, 40 CFR 192 and similar regulations in the Illinois Source Material Milling Regulations at 32 IAC 332.

Due to the fact that overburden, e.g. soil, concrete, and asphalt, effectively shields gamma radiation that may be emitted from a source located deeper than 18 inches, this surficial walkover procedure can only identify radioactive sources within the uppermost 18 inches of soils. Despite the limitations of the gamma detection equipment, this walkover procedure has been helpful in identifying contaminated properties throughout Streeterville.

Equipment
The gamma detection equipment that U.S. EPA may use during a walkover radiation survey include Bicron FIDLER Model G5 probe, Ludlum Model 19 survey meter, and the Ludlum Model 2221 survey meter. The probe and meters will be calibrated to the thorium calibration blocks at the Kerr-McGee Rare Earths Facility.

Health and Safety Precautions
All workers who enter exclusion areas must have the 40 hour HAZWOPER training and, additionally, receive general radiation and site specific radiation training. For example, for a parking lot or paved property, the technician will use Level D. Level D is at least steel-toed boots. The level of protection might be upgraded if conditions warrant such a change.

Survey Technique
First, the technician walks, holding the probe within 6 inches off the ground, the entire area along parallel lines about 3 - 4 feet apart, assessing background levels by looking at the lowest readings and looking for spots and regions of elevated radiation levels.

Next, the technician takes 30 second counts, on contact with the ground, at regular intervals (in the center of each parking space and down the centerline of the driveways) to quantify the exposure environment. The technician may also take readings at selected spots where initial readings were distinct from background levels. If there is an area where a person may be subject to prolong exposure, for example, an attendant's booth, exposure rate measurements may be taken in that area.

Sampling
Soil samples must be analyzed by gamma-ray spectroscopy with settings of 71% for the Gamma Fraction Limit and of 1.2 keV for the Library Energy Tolerance. The date of soil collection and

the date of analysis must be provided. The complete spectroscopy report must be provided for each soil sample including, at a minimum, the soil concentrations in picocuries per gram (listed by gamma-ray energy) for the Identified Nuclides. For all Non-identified Nuclides, the soil concentration in picocuries per gram at each gamma-ray energy must be reported as well.

Interpretation

Generally, if gamma radiation anomalies appear (generally, if measurements are twice the gamma count indicative of 7.1 total radium) then a sample of the soil or material may be obtained to determine the nature of the anomaly. For instance, if the material emitting the excessive radiation is a brick, it is likely that the source is a Naturally Occurring Radioactive Material which is not a hazardous substance as defined by the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. 9601 et seq., (known as CERCLA or Superfund). U.S. EPA will send soil samples to U.S. EPA's National Air and Radiation Environmental Laboratory (NAREL) for analysis.

[May 2005]

CONSENT FOR ACCESS TO PROPERTY

Name: _____
Title: _____
Address: _____
_____

Telephone: _____

Address of Property: 130 E. Lake
Chicago, Illinois

PIN: 17-10-304-020-0000

I consent to officers, employees, contractors, and authorized representatives of the United States Environmental Protection Agency (U.S. EPA), City of Chicago Department of Environment (CDOE), entering and having continued access to this property to conduct a walkover radiation survey and sampling on the property.

I realize that these actions taken by U.S. EPA, CDOE, are undertaken pursuant to its response and enforcement responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601-9675 (1997).

This written permission is given by me voluntarily, on behalf of myself and all other co-owners of this property, with knowledge of my right to refuse and without threats or promises of any kind.

_____ _____

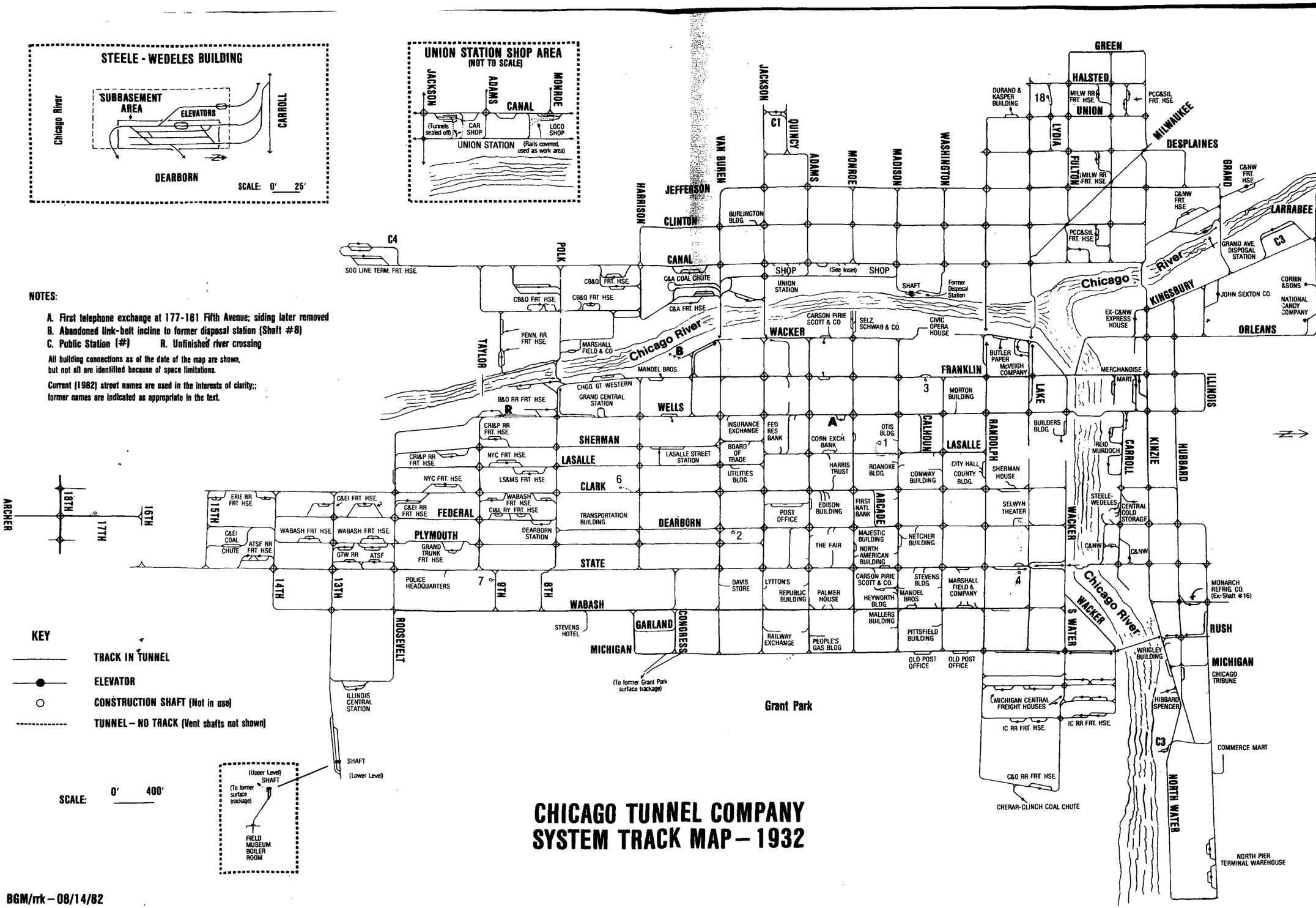
Date Signature

NOTES:

A. First telephone exchange at 177-181 Fifth Avenue; siding later removed
B. Abandoned link-belt incline to former disposal station (Shaft #8)
C. Public Station (#) R. Unfinished river crossing

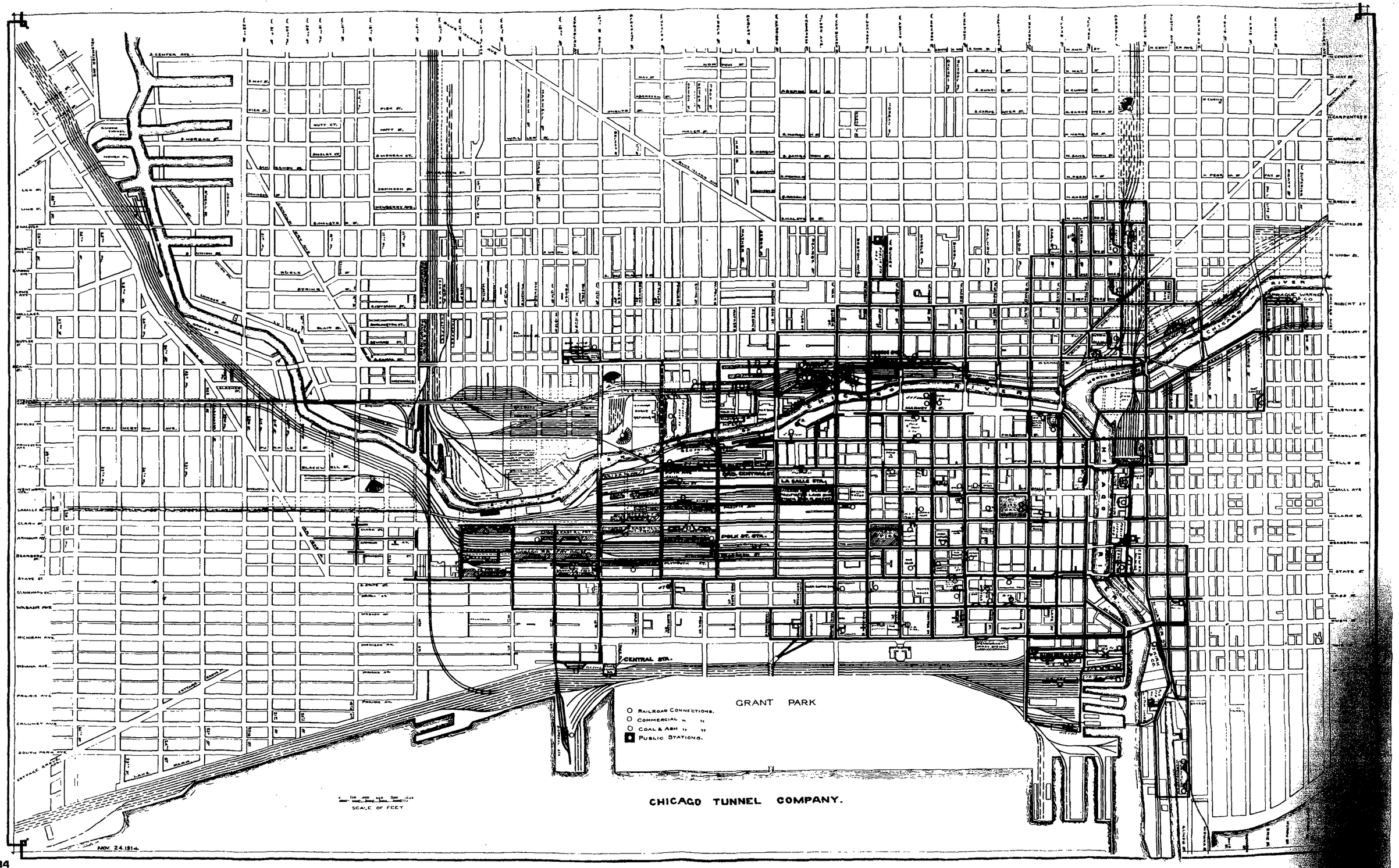
All building connections as of the date of the map are shown, but not all are identified because of space limitations.

Current (1982) street names are used in the interests of clarity;; former names are indicated as appropriate in the text.



CHICAGO TUNNEL COMPANY SYSTEM TRACK MAP – 1932

BGM/mk – 08/14/82


GRANT PARK
RAILROAD CONNECTIONS.
COMMERCIAL " "
COAL & ASH " "
PUBLIC STATIONS.
SCALE OF FEET
CHICAGO TUNNEL COMPANY.
NOV. 24. 1914.